

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

July 22, 2019

CHEVRON USA INCORPORATED
6301 Deauville Blvd. Midland TX 79706
Midland, TX 79706

Re:

29, 26S, 33E, Lea NM
N 32.02110 W -103.59951

CLIENT: CHEVRON USA INCORPORATED
WELL: SD EA 29 32 Fed Com P11 15H
FIELD: Upper Wolfcamp

RIG: Nabors X30
COUNTY: LEA
API NO: 30-025-44335
JOB NO: 19MLD4332

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Jorge Pantoja FE	SD EA 29 32 Fed Com P11 15H Original Hole	935.00 Ft to 19688.00 Ft	March 7, 2019 to June 20, 2019	TelePacer SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Dana Lasher
Field Service Manager

HOBBS OCD
MAR 12 2020
RECEIVED

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
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Schlumberger

Well Reference:
29, 26S, 33E, Lea NM
N 32.02110 W -103.59951

I, Jorge Pantoja certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of March 07, 2019 through June 20, 2019, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 935.00 feet to a depth of 19688.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of CHEVRON USA INCORPORATED for the SD EA 29 32 Fed Com P11 15H Well (Original Hole) API No. 30-025-44335 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Jorge Pantoja
FE

Jorge Pantoja
Jorge Pantoja

Subscribed and Sworn to before me this 1 day of August (month) 2019 (yr)

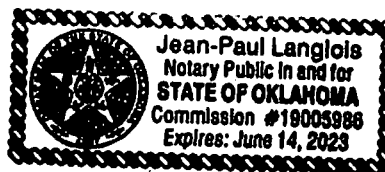
My Commission expires:

6/14/2023

Jean Paul Langlois
Notary Public

(signature)

Comanche Oklahoma
(County State)



Chevron SD EA 29 32 Fed Com P11 15H MWD to 19730ft Survey Geodetic Report (Def Survey)



Report Date: July 19, 2019 - 11:29 AM
Client: Chevron
Field: NM Lea County (NAD 27)
Structure / Slot: Chevron SD EA 29 32 Fed Com P11 Pad / 15H
Well: SD EA 29 32 Fed Com P11 15H
Borehole: SD EA 29 32 Fed Com P11 15H
UWI / API#: Unknown / Unknown
Survey Name: Chevron SD EA 29 32 Fed Com P11 15H MWD to 19730ft
Survey Date: July 19, 2019
Tort / AHD / DDI / ERD Ratio: 224.661 * / 8132.813 ft / 6.464 / 0.856
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 1' 15.96077", W 103° 35' 58.22396"
Location Grid N/E Y/X: N 372175.000 RUS, E 727433.000 RUS
CRS Grid Convergence Angle: 0.3891 *
Grid Scale Factor: 0.99996834
Version / Patch: 2.10.760.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.530 * (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB = 32.6ft
TVD Reference Elevation: 3247.600 ft above
Seabed / Ground Elevation: 3215.000 ft above
Magnetic Declination: 6.656 *
Total Gravity Field Strength: 998.4335mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47658.043 nT
Magnetic Dip Angle: 59.619 *
Declination Date: July 19, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3891 *
Total Corr Mag North-Grid North: 6.2688 *
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	372175.00	727433.00	N 32 1 15.96	W 103 35 58.22
Adjusted KB	33.00	0.00	0.00	33.00	0.00	0.00	0.00	0.00	372175.00	727433.00	N 32 1 15.96	W 103 35 58.22
First 3rd Party Survey	165.00	0.90	164.88	164.99	1.00	-1.00	0.27	0.88	372174.00	727433.27	N 32 1 15.95	W 103 35 58.22
	253.00	0.60	216.83	252.99	2.04	-2.04	0.17	0.81	372172.96	727433.17	N 32 1 15.94	W 103 35 58.22
	343.00	0.40	163.39	342.98	2.71	-2.72	-0.02	0.54	372172.29	727432.98	N 32 1 15.93	W 103 35 58.22
	444.00	0.90	271.14	443.98	3.03	-3.04	-0.71	1.08	372171.96	727432.29	N 32 1 15.93	W 103 35 58.23
	529.00	1.30	313.80	528.97	2.34	-2.36	-2.07	1.04	372172.64	727430.93	N 32 1 15.94	W 103 35 58.25
	614.00	1.10	322.20	613.95	1.02	-1.04	-3.27	0.31	372173.96	727429.73	N 32 1 15.95	W 103 35 58.26
	698.00	1.00	329.90	697.93	-0.26	0.23	-4.13	0.21	372175.23	727428.87	N 32 1 15.96	W 103 35 58.27
	784.00	0.60	223.50	783.93	-0.59	0.55	-4.82	1.52	372175.55	727428.18	N 32 1 15.97	W 103 35 58.28
Last 3rd Party Survey	808.00	0.40	172.70	805.93	-0.43	0.39	-4.89	2.12	372175.39	727428.11	N 32 1 15.96	W 103 35 58.28
First SLB MWD Survey	935.00	0.48	323.95	934.93	-0.42	0.38	-5.15	0.66	372175.38	727427.85	N 32 1 15.96	W 103 35 58.28
	970.00	0.40	326.92	969.92	-0.64	0.60	-5.30	0.24	372175.60	727427.70	N 32 1 15.97	W 103 35 58.29
	1064.00	0.29	319.39	1063.92	-1.10	1.06	-5.64	0.13	372176.06	727427.36	N 32 1 15.97	W 103 35 58.29
	1158.00	1.25	23.04	1157.91	-2.22	2.18	-5.39	1.22	372177.18	727427.61	N 32 1 15.98	W 103 35 58.29
	1251.00	2.67	32.74	1250.86	-4.97	4.94	-3.82	1.56	372179.94	727429.18	N 32 1 16.01	W 103 35 58.27
	1344.00	4.12	39.40	1343.89	-9.34	9.34	-0.53	1.61	372184.34	727432.47	N 32 1 16.05	W 103 35 58.23
	1438.00	5.48	53.35	1437.36	-14.59	14.63	5.22	1.90	372189.83	727438.22	N 32 1 16.11	W 103 35 58.16
	1532.00	7.48	55.18	1530.76	-20.68	20.79	13.83	2.12	372195.79	727446.83	N 32 1 16.17	W 103 35 58.06
	1625.00	7.98	56.34	1622.92	-27.62	27.82	24.16	0.58	372202.82	727457.16	N 32 1 16.23	W 103 35 57.94
	1719.00	7.74	54.31	1716.03	-34.84	35.13	34.73	0.39	372210.13	727467.73	N 32 1 16.31	W 103 35 57.82
	1906.00	7.27	58.80	1901.43	-48.15	48.60	55.08	0.40	372223.60	727488.08	N 32 1 16.44	W 103 35 57.58
	2000.00	7.15	59.33	1994.69	-54.13	54.67	65.20	0.15	372229.67	727498.20	N 32 1 16.50	W 103 35 57.48
	2095.00	6.94	57.88	2088.97	-60.12	60.74	75.14	0.29	372235.73	727508.14	N 32 1 16.56	W 103 35 57.35
	2189.00	7.63	58.34	2182.21	-66.33	67.03	85.27	0.74	372242.03	727518.26	N 32 1 16.62	W 103 35 57.23
	2282.00	7.86	58.76	2274.37	-72.68	73.47	96.01	0.32	372248.47	727529.01	N 32 1 16.68	W 103 35 57.10
	2377.00	7.62	59.92	2368.50	-79.02	79.90	107.08	0.25	372254.90	727540.07	N 32 1 16.74	W 103 35 56.97
	2470.00	7.31	61.54	2460.71	-84.85	85.81	117.61	0.40	372260.81	727550.61	N 32 1 16.80	W 103 35 56.85
	2563.00	8.06	59.33	2552.88	-90.90	91.96	128.42	0.87	372266.96	727561.42	N 32 1 16.88	W 103 35 56.73
	2658.00	8.69	59.30	2646.86	-97.87	99.02	140.32	0.66	372274.02	727573.32	N 32 1 16.93	W 103 35 56.59
	2752.00	8.61	60.54	2739.79	-104.85	106.11	152.55	0.22	372281.10	727585.55	N 32 1 17.00	W 103 35 56.44
	2847.00	8.38	61.63	2833.75	-111.54	112.89	164.84	0.30	372287.89	727597.83	N 32 1 17.07	W 103 35 56.30
	2940.00	8.26	62.65	2925.77	-117.73	119.18	176.73	0.20	372294.18	727609.73	N 32 1 17.13	W 103 35 56.16
	3033.00	8.07	63.80	3017.83	-123.58	125.13	188.52	0.27	372300.13	727621.52	N 32 1 17.19	W 103 35 56.02
	3126.00	6.31	61.06	3110.09	-128.85	130.49	198.88	1.93	372305.48	727631.85	N 32 1 17.24	W 103 35 55.90
	3218.00	4.57	54.04	3201.68	-133.39	135.09	208.25	2.02	372310.08	727639.24	N 32 1 17.28	W 103 35 55.82
	3311.00	2.90	43.28	3294.48	-137.24	138.98	210.86	1.94	372313.97	727643.85	N 32 1 17.32	W 103 35 55.76
	3405.00	2.80	48.06	3388.38	-140.48	142.24	214.20	0.27	372317.24	727647.19	N 32 1 17.35	W 103 35 55.72
	3499.00	2.87	55.39	3482.25	-143.32	145.11	217.84	0.39	372320.11	727650.83	N 32 1 17.38	W 103 35 55.68
	3593.00	2.27	69.98	3576.15	-145.26	147.09	221.53	0.94	372322.08	727654.52	N 32 1 17.40	W 103 35 55.64
	3687.00	2.09	72.52	3670.09	-146.39	148.24	224.91	0.22	372323.23	727657.90	N 32 1 17.41	W 103 35 55.60
	3781.00	2.28	67.37	3764.02	-147.60	149.47	228.27	0.29	372324.47	727661.27	N 32 1 17.42	W 103 35 55.56
	3876.00	1.98	69.31	3858.95	-148.88	150.78	231.55	0.32	372325.78	727664.54	N 32 1 17.44	W 103 35 55.52
	3970.00	1.60	41.80	3952.91	-150.41	152.33	233.95	0.98	372327.33	727666.94	N 32 1 17.45	W 103 35 55.49
	4065.00	1.54	25.61	4047.87	-152.53	154.47	235.39	0.47	372329.46	727668.38	N 32 1 17.47	W 103 35 55.48
	4159.00	1.30	37.95	4141.84	-154.50	156.45	238.59	0.41	372331.44	727669.58	N 32 1 17.49	W 103 35 55.46
	4253.00	1.32	60.37	4235.82	-155.87	157.83	238.18	0.54	372332.82	727671.18	N 32 1 17.51	W 103 35 55.45
	4346.00	1.43	63.29	4328.79	-156.90	158.88	240.15	0.14	372333.87	727673.14	N 32 1 17.52	W 103 35 55.42
	4442.00	1.29	79.26	4424.77	-157.62	159.62	242.28	0.42	372334.61	727675.28	N 32 1 17.52	W 103 35 55.40
	4535.00	0.63	120.78	4517.75	-157.54	159.55	243.75	0.99	372334.54	727676.74	N 32 1 17.52	W 103 35 55.38
	4630.00	0.64	139.02	4612.75	-156.87	158.88	244.55	0.21	372333.88	727677.54	N 32 1 17.52	W 103 35 55.37
	4724.00	0.78	125.85	4706.74	-156.09	158.11	245.41	0.23	372333.11	727678.40	N 32 1 17.51	W 103 35 55.36
	4818.00	0.63	126.24	4800.73	-155.40	157.43	246.35	0.16	372332.43	727679.34	N 32 1 17.50	W 103 35 55.35
	4911.00	0.52	131.01	4893.73	-154.82	156.85	247.08	0.13	372331.85	727680.07	N 32 1 17.50	W 103 35 55.34
	5005.00	0.45	127.16	4987.72	-154.31	156.35	247.69	0.08	372331.34	727680.68	N 32 1 17.49	W 103 35 55.33
	5100.00	0.39	127.18	5082.72	-153.89	155.93	248.25	0.06	372330.92	727681.24	N 32 1 17.49	W 103 35 55.33
	5194.00	0.30	128.45	5176.72	-153.54	155.59	248.70	0.10	372330.58	727681.89	N 32 1 17.48	W 103 35 55.32
	5288.00	0.68	211.43	5270.72	-152.92	154.97	248.61	0.76	372329.96	727681.60	N 32 1 17.48	W 103 35 55.32
	5382.00	1.23	226.25	5364.70	-151.76	153.79	247.59	0.84	372328.79	727680.58	N 32 1 17.47	W 103 35 55.34
	5476.00	0.51	207.47	5458.69	-150.69	152.72	246.67	0.81	372327.72	727679.68	N 32 1 17.46	W 103 35 55.35
	5569.00	0.52	211.02	5551.69	-149.97	151.99	246.26	0.04	372326.99	727679.25	N 32 1 17.45	W 103 35 55.35
	5664.00	0.72	214.42	5646.68	-149.11	151.13	245.70	0.21	372326.13	727678.69	N 32 1 17.44	W 103 35 55.36
	5757.00	0.83	211.00	5739.68	-148.20	150.21	245.10	0.11	372325.21	727678.10	N 32 1 17.43	W 103 35 55.37
	5851.00	0.55	225.10	5833.67	-147.44	149.45	244.52	0.18	372324.45	727677.51	N 32 1 17.42	W 103 35 55.37
	5946.00	0.68	224.03	5928.67	-146.72	148.72	243.80	0.14	372323.72	727676.80	N 32 1 17.42	W 103 35 55.38
	6040.00	0.52	216.83	6022.66	-145.98	147.98	243.16	0.19	372322.98	727676.15	N 32 1 17.41	W 103 35 55.39
	6134.00	0.41	218.16	6116.66	-145.38	147.38	242.70	0.12	372322.37	727675.69	N 32 1 17.40	W 103 35 55.39
	6228.00	0.29	186.97	6210.66	-144.88	146.87	242.46	0.23	372321.87	727675.45	N 32 1 17.40	W 103 35 55.40
	6323.00	0.34	193.44	6305.66	-144.37	146.36	242.37	0.06	372321.36	727675.36	N 32 1 17.39	W 103 35 55.40
	6418.00	0.36	176.16	6400.65	-143.80	145.79	242.32	0.11	372320.79	727675.31	N 32 1 17.39	W 103 35 55.40
	6518.00	0.57	242.79	6500.65	-143.26	145.25	241.90	0.54	372320.24	727674.89	N 32 1 17.38	W 103 35 55.40
	6607.00	0.75	269.40	6589.65	-143.06	145.						

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100m)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	6890.00	0.60	263.37	6872.63	-142.65	144.61	237.62	0.14	372319.80	727670.82	N 32 1 17.38	W 103 35 55.45
	6895.00	0.58	260.72	6967.62	-142.53	144.47	236.68	0.04	372319.47	727669.85	N 32 1 17.37	W 103 35 55.46
	7080.00	0.63	253.51	7062.62	-142.31	144.25	235.68	0.10	372319.24	727668.87	N 32 1 17.37	W 103 35 55.48
	7174.00	0.75	247.44	7156.61	-141.93	143.86	234.62	0.15	372318.86	727667.81	N 32 1 17.37	W 103 35 55.49
	7268.00	0.76	244.82	7250.60	-141.44	143.36	233.48	0.04	372318.36	727666.48	N 32 1 17.36	W 103 35 55.50
	7381.00	0.76	246.16	7343.59	-140.94	142.85	232.36	0.02	372317.85	727665.35	N 32 1 17.36	W 103 35 55.51
	7454.00	0.50	244.16	7436.59	-140.52	142.42	231.43	0.28	372317.42	727664.42	N 32 1 17.35	W 103 35 55.52
	7547.00	0.65	236.81	7529.58	-140.06	141.96	230.63	0.18	372316.95	727663.82	N 32 1 17.35	W 103 35 55.53
	7642.00	0.84	236.12	7624.57	-139.39	141.28	229.60	0.20	372316.27	727662.59	N 32 1 17.34	W 103 35 55.55
	7836.00	1.75	254.95	7818.52	-137.86	139.71	225.56	0.51	372314.71	727658.55	N 32 1 17.33	W 103 35 55.59
	7930.00	1.82	254.84	7912.48	-137.12	138.95	222.73	0.07	372313.95	727655.72	N 32 1 17.32	W 103 35 55.63
	8024.00	1.59	258.39	8006.44	-136.49	138.30	220.01	0.27	372313.29	727653.00	N 32 1 17.31	W 103 35 55.66
	8119.00	1.82	241.05	8101.40	-135.59	137.38	217.54	0.51	372312.38	727650.54	N 32 1 17.31	W 103 35 55.69
	8212.00	1.82	232.75	8194.36	-134.08	135.85	215.22	0.34	372310.85	727648.21	N 32 1 17.29	W 103 35 55.71
	8307.00	1.72	229.67	8289.31	-132.27	134.02	212.93	0.15	372309.01	727645.92	N 32 1 17.27	W 103 35 55.74
	8494.00	1.63	224.85	8478.23	-128.60	130.31	208.92	0.09	372305.31	727641.91	N 32 1 17.24	W 103 35 55.79
	8587.00	1.41	232.69	8569.20	-126.98	128.68	207.07	0.33	372303.68	727640.07	N 32 1 17.22	W 103 35 55.81
	8681.00	1.41	229.95	8663.17	-125.55	127.24	205.27	0.07	372302.23	727638.28	N 32 1 17.21	W 103 35 55.83
	8775.00	1.48	230.53	8757.14	-124.05	125.72	203.45	0.08	372300.72	727636.44	N 32 1 17.19	W 103 35 55.85
	8868.00	1.75	224.58	8850.10	-122.29	123.95	201.52	0.34	372298.94	727634.51	N 32 1 17.17	W 103 35 55.87
	8962.00	1.56	223.16	8944.06	-120.35	121.99	199.64	0.21	372296.99	727632.63	N 32 1 17.15	W 103 35 55.90
	9056.00	1.26	230.09	9038.04	-118.77	120.40	197.97	0.37	372295.39	727630.96	N 32 1 17.14	W 103 35 55.92
	9150.00	1.47	248.81	9132.01	-117.88	119.29	196.06	0.52	372294.29	727629.05	N 32 1 17.13	W 103 35 55.94
	9244.00	1.59	252.31	9225.98	-116.86	118.46	193.89	0.17	372293.45	727628.68	N 32 1 17.12	W 103 35 55.97
	9338.00	1.52	244.11	9319.94	-115.94	117.52	191.33	0.25	372292.51	727624.32	N 32 1 17.11	W 103 35 55.99
	9431.00	1.07	351.45	9412.93	-116.27	117.84	190.09	2.26	372292.83	727623.08	N 32 1 17.11	W 103 35 56.01
	9524.00	1.08	7.07	9505.91	-118.00	119.56	190.07	0.31	372294.56	727623.06	N 32 1 17.13	W 103 35 56.01
	9617.00	0.96	44.08	9598.90	-119.43	120.99	190.72	0.71	372295.99	727623.71	N 32 1 17.15	W 103 35 56.00
	9710.00	0.78	51.23	9691.89	-120.37	121.95	191.75	0.23	372296.95	727624.74	N 32 1 17.15	W 103 35 55.99
	9803.00	0.60	31.39	9784.88	-121.18	122.76	192.50	0.32	372297.76	727625.49	N 32 1 17.16	W 103 35 55.98
	9897.00	0.44	19.33	9878.88	-121.94	123.52	192.87	0.21	372298.52	727625.87	N 32 1 17.17	W 103 35 55.97
	9990.00	0.30	23.51	9971.87	-122.49	124.08	193.09	0.15	372299.08	727626.08	N 32 1 17.18	W 103 35 55.97
	10084.00	0.38	3.27	10065.87	-123.03	124.62	193.21	0.15	372299.62	727626.20	N 32 1 17.18	W 103 35 55.97
	10178.00	0.18	314.40	10159.87	-123.45	125.03	193.12	0.31	372300.03	727626.11	N 32 1 17.19	W 103 35 55.97
	10272.00	0.66	61.55	10253.87	-123.80	125.40	193.49	0.78	372300.39	727626.48	N 32 1 17.19	W 103 35 55.97
	10368.00	0.74	54.75	10349.86	-124.42	126.02	194.48	0.12	372301.01	727627.47	N 32 1 17.19	W 103 35 55.96
	10462.00	0.58	61.05	10443.86	-124.99	126.60	195.39	0.19	372301.59	727628.39	N 32 1 17.20	W 103 35 55.94
	10557.00	0.23	33.44	10538.85	-125.38	126.99	195.92	0.41	372301.99	727628.91	N 32 1 17.20	W 103 35 55.94
	10651.00	0.46	4.48	10632.85	-125.91	127.52	196.05	0.30	372302.52	727629.05	N 32 1 17.21	W 103 35 55.94
	10746.00	0.17	357.35	10727.85	-126.43	128.04	196.08	0.31	372303.04	727629.07	N 32 1 17.21	W 103 35 55.94
	10840.00	0.25	325.81	10821.85	-126.74	128.35	195.95	0.15	372303.35	727628.95	N 32 1 17.22	W 103 35 55.94
	10934.00	0.28	289.45	10915.85	-126.99	128.60	195.62	0.18	372303.59	727628.62	N 32 1 17.22	W 103 35 55.94
	11028.00	0.80	290.47	11009.84	-127.30	128.90	194.79	0.55	372303.90	727627.78	N 32 1 17.22	W 103 35 55.95
	11122.00	0.36	70.01	11103.84	-127.64	129.24	194.45	1.17	372304.23	727627.45	N 32 1 17.23	W 103 35 55.96
	11215.00	0.13	306.50	11196.84	-127.80	129.40	194.65	0.48	372304.40	727627.64	N 32 1 17.23	W 103 35 55.95
	11309.00	0.80	278.79	11290.84	-127.95	129.54	193.91	0.74	372304.54	727626.90	N 32 1 17.23	W 103 35 55.96
	11404.00	0.44	313.85	11385.83	-128.29	129.88	192.99	0.55	372304.87	727625.98	N 32 1 17.23	W 103 35 55.97
	11498.00	0.13	323.37	11479.83	-128.63	130.21	192.66	0.33	372305.21	727625.66	N 32 1 17.24	W 103 35 55.98
	11588.00	0.12	39.04	11569.83	-128.78	130.37	192.66	0.17	372305.36	727625.66	N 32 1 17.24	W 103 35 55.98
	11683.00	1.83	203.68	11664.82	-127.47	129.05	192.12	2.05	372304.05	727625.11	N 32 1 17.22	W 103 35 55.98
	11731.00	7.84	170.98	11712.63	-123.53	125.12	192.32	13.28	372300.11	727625.32	N 32 1 17.19	W 103 35 55.98
	11779.00	13.99	185.12	11759.74	-114.67	116.27	194.33	13.00	372291.28	727627.32	N 32 1 17.10	W 103 35 55.96
Heel HL Cross	11845.00	23.46	168.29	11822.18	-94.01	95.64	199.05	14.43	372270.64	727632.05	N 32 1 16.89	W 103 35 55.90
	11873.00	27.49	169.00	11847.45	-82.18	83.84	201.42	14.43	372258.83	727634.41	N 32 1 16.78	W 103 35 55.88
	11967.00	33.65	164.84	11928.35	-35.61	37.35	212.38	6.93	372212.35	727645.37	N 32 1 16.32	W 103 35 55.75
	12062.00	38.60	168.32	12005.07	18.96	-17.11	225.27	5.64	372157.89	727658.26	N 32 1 15.78	W 103 35 55.61
	12157.00	47.74	170.03	12074.29	82.84	-80.89	237.38	9.70	372094.11	727670.38	N 32 1 15.14	W 103 35 55.47
	12251.00	53.71	169.00	12133.77	154.48	-152.41	250.65	6.41	372022.60	727683.64	N 32 1 14.44	W 103 35 55.32
	12346.00	56.89	170.05	12187.84	231.36	-229.20	264.83	3.47	371945.81	727697.82	N 32 1 13.87	W 103 35 55.17
	12440.00	64.55	173.79	12233.79	312.56	-310.31	276.24	8.86	371864.70	727709.23	N 32 1 13.07	W 103 35 55.04
	12535.00	70.07	173.73	12270.43	399.73	-397.40	285.77	5.81	371777.81	727718.76	N 32 1 12.01	W 103 35 54.94
	12630.00	76.90	172.74	12295.81	490.63	-488.21	296.56	9.35	371686.81	727729.55	N 32 1 11.11	W 103 35 54.82
	12725.00	86.39	175.03	12307.97	584.32	-581.82	306.57	8.24	371593.20	727739.56	N 32 1 10.18	W 103 35 54.71
	12819.00	87.94	174.99	12312.62	677.91	-675.35	314.74	1.65	371499.68	727747.73	N 32 1 9.26	W 103 35 54.62
	12915.00	88.01	174.60	12317.07	803.40	-800.75	326.16	0.31	371374.28	727759.15	N 32 1 8.01	W 103 35 54.50
	13039.00	87.73	176.23	12320.56	897.09	-894.38	333.67	1.78	371280.65	727768.66	N 32 1 7.09	W 103 35 54.42
	13134.00	87.52	180.10	12324.50	991.96	-989.23	336.71	4.08	371185.80	727769.70	N 32 1 6.15	W 103 35 54.39
	13228.00	87.77	180.63	12328.36	1085.87	-1083.15	336.11	0.62	371091.69	727769.10	N 32 1 5.22	W 103 35 54.41
	13322.00	87.39	181.12	12332.33	1179.76	-1177.06	334.67	0.66	370997.98	727767.66	N 32 1 4.29	W 103 35 54.43
	13511.00	87.11	181.30	12341.40	1368.48	-1365.80	330.69	0.18	370809.25	727763.88	N 32 1 2.42	W 103 35 54.49
	13605.00	87.08	181.40	12346.16	1462.29	-1459.65	326.48	0.11	370715.40	727761.47	N 32 1 1.49	W 103 35 54.52
	13699.00	87.77	180.77	12350.39	1556.16	-1553.54	326.70	0.99	370621.52	727759.89	N 32 1 0.57	W 103 35 54.55
	13793.00	88.49	181.59	12353.48	1650.07	-1647.48	324.76	1.18	370527.59	727757.75	N 32 0 59.64	W 103 35 54.58
	13888.00	90.21	183.78	12354.53	1744.91	-1742.34	320.31	2.93	370432.71	727753.30	N 32 0 58.70	W 103 35 54.84
	13982.00	89.38	182.44	12354.87	1838.73	-1836.20	315.21	1.68	370338.86	727748.20	N 32 0 57.77	W 103 35 54.71
	14077.00	86.15	180.83	12358.57	1933.57	-1931.08	312.50	3.80	370243.99	727745.49	N 32 0 56.83	W 103 35 54.75
	14170.00	87.35	181.28	12363.85	2026.39	-2023.91	310.					

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	16716.00	90.00	180.34	12380.40	4571.19	-4568.68	325.28	1.41	367606.48	727758.27	N 32 0 30.73	W 103 35 54.81
	16812.00	89.59	180.18	12380.74	4687.18	-4664.67	324.84	0.46	367510.48	727757.83	N 32 0 29.78	W 103 35 54.82
	16906.00	89.52	179.46	12381.47	4781.18	-4758.67	325.14	0.77	367416.49	727758.13	N 32 0 28.85	W 103 35 54.82
	17001.00	91.14	178.15	12380.92	4856.16	-4853.64	327.12	2.19	367321.52	727760.11	N 32 0 27.91	W 103 35 54.81
	17096.00	89.90	178.19	12380.06	4951.13	-4948.59	330.15	1.31	367226.58	727763.14	N 32 0 26.97	W 103 35 54.78
	17191.00	89.66	175.82	12380.42	5046.03	-5043.45	335.11	2.51	367131.72	727768.10	N 32 0 26.03	W 103 35 54.73
	17286.00	88.80	174.84	12381.70	5140.76	-5138.13	342.85	1.37	367037.05	727775.84	N 32 0 25.09	W 103 35 54.65
	17381.00	89.97	178.65	12382.72	5235.63	-5232.95	348.24	4.20	366942.23	727781.23	N 32 0 24.15	W 103 35 54.59
	17475.00	89.79	178.45	12382.92	5329.61	-5326.92	350.62	0.29	366846.26	727783.61	N 32 0 23.22	W 103 35 54.57
	17570.00	90.34	178.73	12382.81	5424.60	-5421.89	352.96	0.65	366753.29	727785.94	N 32 0 22.28	W 103 35 54.55
	17665.00	90.52	178.07	12382.10	5519.58	-5518.85	355.61	0.72	366658.34	727788.60	N 32 0 21.34	W 103 35 54.53
	17760.00	90.00	177.51	12381.67	5614.53	-5611.78	359.27	0.80	366563.41	727792.28	N 32 0 20.40	W 103 35 54.49
	17855.00	89.59	178.77	12382.01	5709.45	-5706.68	364.01	0.89	366468.54	727797.00	N 32 0 19.47	W 103 35 54.45
	17949.00	90.41	180.33	12382.01	5803.42	-5800.61	368.39	3.89	366374.59	727799.38	N 32 0 18.54	W 103 35 54.43
	18044.00	90.41	177.94	12381.33	5898.41	-5895.59	367.82	2.52	366279.81	727800.81	N 32 0 17.60	W 103 35 54.42
	18138.00	90.45	181.25	12380.62	5992.39	-5989.57	368.49	3.52	366185.63	727801.48	N 32 0 16.67	W 103 35 54.42
	18233.00	90.45	182.11	12379.87	6087.32	-6084.53	365.70	0.91	366090.68	727798.69	N 32 0 15.73	W 103 35 54.46
	18328.00	89.86	181.67	12379.82	6182.24	-6179.47	362.57	0.77	365995.73	727795.56	N 32 0 14.79	W 103 35 54.50
	18517.00	90.03	181.26	12379.80	6371.13	-6368.41	357.74	0.23	365806.80	727790.73	N 32 0 12.92	W 103 35 54.57
	18612.00	89.07	180.29	12380.54	6466.10	-6463.40	356.45	1.44	365711.82	727789.44	N 32 0 11.98	W 103 35 54.59
	18707.00	89.04	179.77	12382.11	6561.09	-6558.38	356.40	0.55	365616.84	727789.39	N 32 0 11.04	W 103 35 54.60
	18800.00	89.07	179.05	12383.65	6654.07	-6651.37	357.36	0.77	365523.86	727790.35	N 32 0 10.12	W 103 35 54.60
	18894.00	88.93	179.64	12385.29	6748.06	-6745.35	358.44	0.64	365429.88	727791.42	N 32 0 9.19	W 103 35 54.59
	18987.00	89.04	179.13	12386.93	6841.04	-6838.33	359.43	0.56	365336.91	727792.42	N 32 0 8.27	W 103 35 54.59
	19082.00	89.62	180.61	12388.04	6936.03	-6933.32	359.65	1.87	365241.92	727792.64	N 32 0 7.33	W 103 35 54.59
	19176.00	90.58	179.79	12387.88	7030.02	-7027.31	359.32	1.34	365147.92	727792.31	N 32 0 6.40	W 103 35 54.61
	19270.00	90.48	178.51	12387.01	7124.02	-7121.30	360.72	1.37	365053.94	727793.70	N 32 0 5.47	W 103 35 54.60
	19459.00	91.00	178.41	12384.57	7312.97	-7310.21	365.80	0.28	364865.03	727798.78	N 32 0 3.60	W 103 35 54.55
	19553.00	91.03	178.32	12382.90	7406.93	-7404.16	368.48	0.10	364771.09	727801.46	N 32 0 2.67	W 103 35 54.53
	19647.00	91.00	178.84	12381.24	7500.91	-7498.13	369.99	1.62	364677.12	727802.97	N 32 0 1.74	W 103 35 54.52
Toe HL Cross	19680.00	91.05	180.07	12380.65	7533.91	-7531.12	370.01	0.72	364644.13	727803.00	N 32 0 1.41	W 103 35 54.52
Last SLB MWD Survey	19688.00	91.06	180.13	12380.50	7541.90	-7539.12	370.00	0.72	364636.13	727802.98	N 32 0 1.33	W 103 35 54.52
Projection to Bit	19730.00	91.06	180.13	12379.73	7583.89	-7581.12	369.90	0.00	364594.14	727802.89	N 32 0 0.92	W 103 35 54.53

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	32.600	1/98.425	30.000	30.000	A001Ma_MWD-Depth Only	SD EA 29 32 Fed Com P11 15H / Chevron SD EA 29 32 Fed Com
	1	32.600	32.600	Act Stns	30.000	30.000	A001Ma_MWD-Depth Only	SD EA 29 32 Fed Com P11 15H / Chevron SD EA 29 32 Fed Com
	1	32.600	806.000	Act Stns	30.000	30.000	A001Ma_MWD	SD EA 29 32 Fed Com P11 15H / Chevron SD EA 29 32 Fed Com
	1	806.000	19730.000	Act Stns	30.000	30.000	B001Ma_MWD+HDGM	SD EA 29 32 Fed Com P11 15H / Chevron SD EA 29 32 Fed Com

...SD EA 29 32 Fed Com P11 15H\Chevron SD EA 29 32 Fed Com P11 15H MWD to 19730ft